UNITED STATES
DEPARTMENT OF
AGRICULTURE

FOREST SERVICE

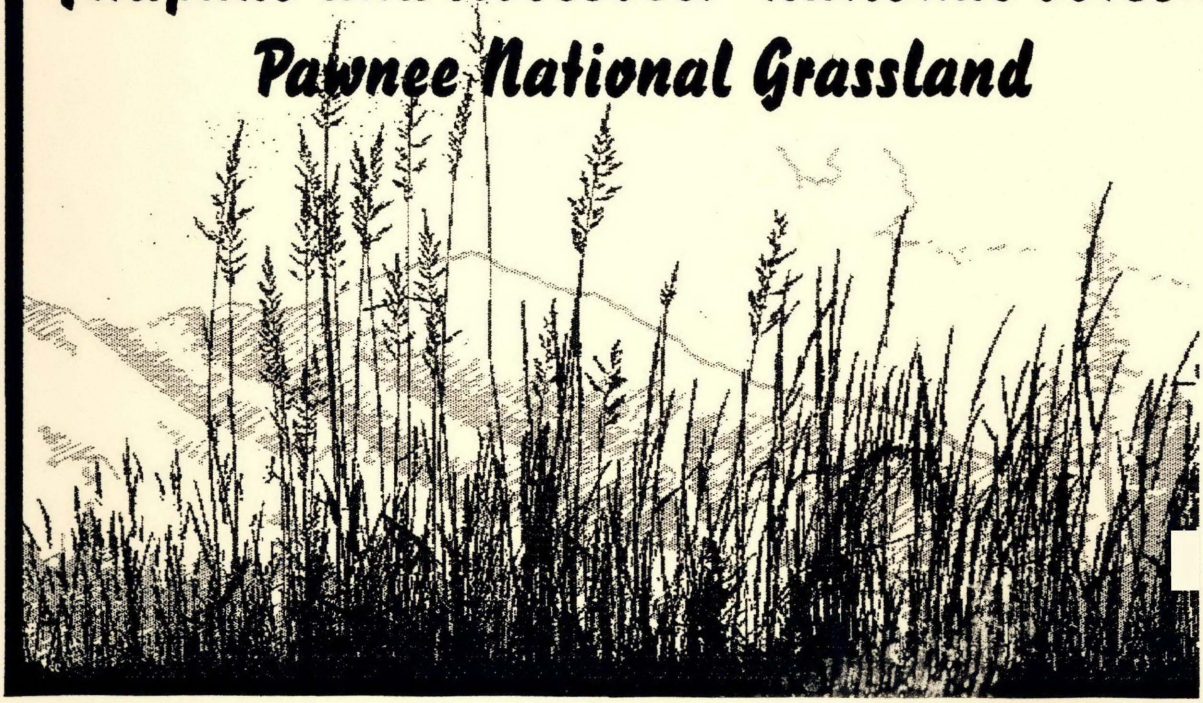
Rocky Mountain
Region

Draft Environmental Impact Statement

to Accompany the Proposed Revised Land and Resource Management Plan

SUMMARY

Arapaho and Roosevelt National Forests
Pawnee National Grassland



Draft Environmental Impact Statement

SUMMARY

Arapaho and Roosevelt National Forests
Pawnee National Grassland
240 West Prospect Road
Fort Collins, CO 80526

INTRODUCTION

This is a summary of a Draft Environmental Impact Statement. This particular DEIS is for the Arapaho and Roosevelt National Forests and Pawnee National Grassland's *Revised Land and Resource Management Plan.*

We know it's a mouthful, but don't let the title put you off. We've written this summary to be as straightforward as the morning paper, and we've done it for a good reason—we want your help making some important decisions. After all, the National Forests and National Grasslands belong to all of us.

Anyone who has managed a project knows it's not enough to stay a step ahead of events. If a project is to operate smoothly, plans have to be made, a vision for the future needs to be shaped. The same applies to managing our Forests and Grasslands. As things change, we at the Forest Service need to update our management plans to reflect new conditions and new knowledge. We are now doing just that, reworking the original Land and Resource Management Plan—more commonly called the *Forest Plan*—for Arapaho and Roosevelt National Forests and Pawnee National Grassland.

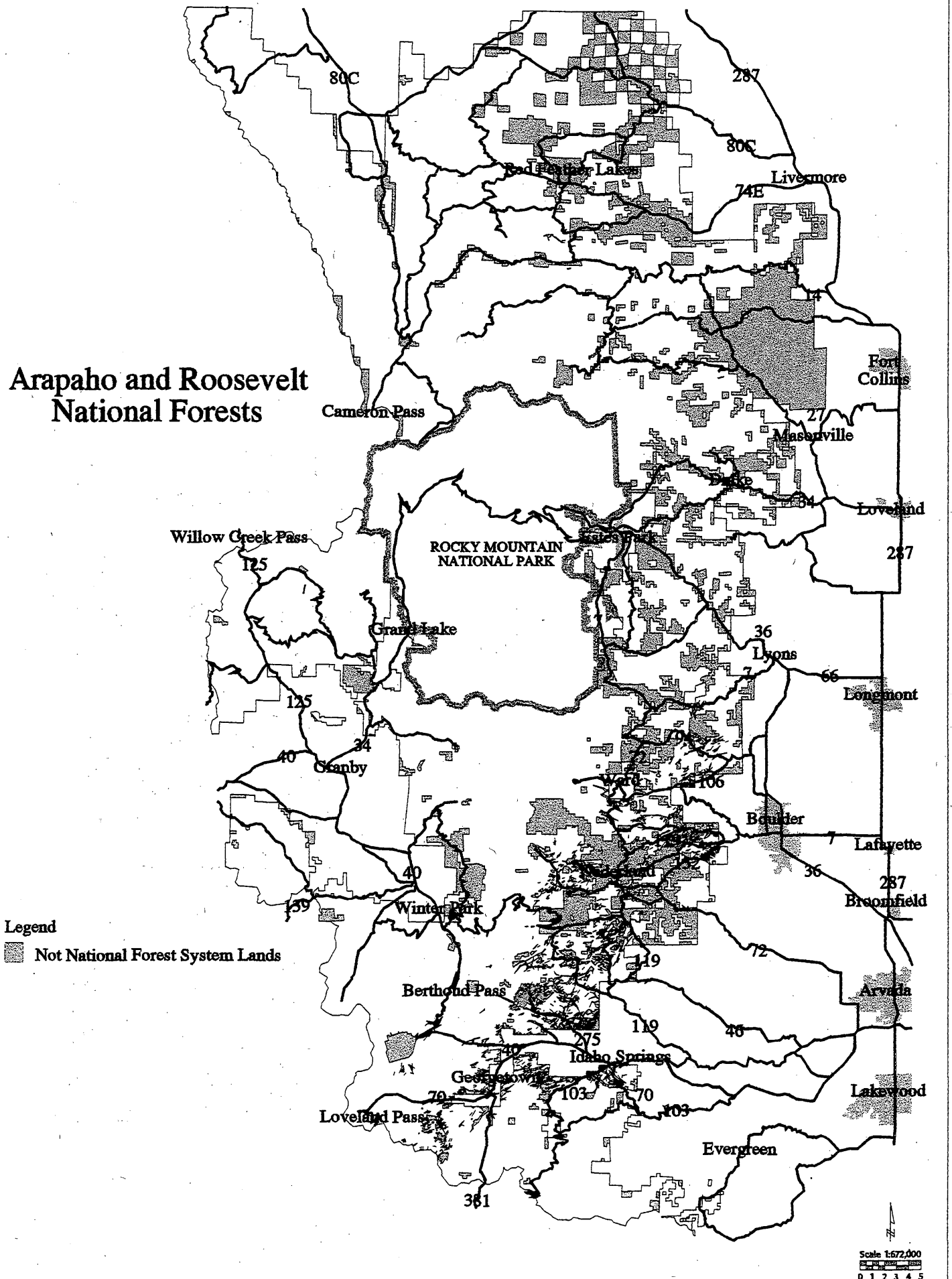
This summary has four goals:

1) present the latest issues in managing the Forests and Grassland;
2) show you the **alternative Forest Plans** we've arrived at for dealing with these issues;
3) describe probable effects each alternative will have on the Forests and Grassland; and
4) give you a chance to review and comment on these alternatives.

At the end of the revision process, the chosen alternative will become the new Forest Plan.

(Although the Forest Plan we are assembling is officially a *revised* Forest Plan, and retains those parts of the original Forest Plan that proved effective, it marks a new step in Forests and Grassland management. For simplicity's sake we will refer to it as the *new Forest Plan.*)

The new Forest Plan will not be written solely by "experts." Public opinion and understanding are as vital as any findings our staff might make. At the end of this summary you will find some guidelines on how and where to send us your feedback. Together we will construct a new Forest Plan.


Arapaho and Roosevelt National Forests
80C
287
80C
Livermore
74E
14
Fort Collins
Cameron Pass
27
Masonville
Loveland
287
Willow Creek Pass
125
ROCKY MOUNTAIN NATIONAL PARK
Estes Park
Grand Lake
36
Lyons
66
Longmont
125
34
40
Granby
Ward
106
Boulder
Lafayette
40
36
287
Broomfield
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Winter Park
72
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Berthoud Pass
Arvada
119
40
75
Idaho Springs
Georgetown
103
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Lakewood
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Loveland Pass
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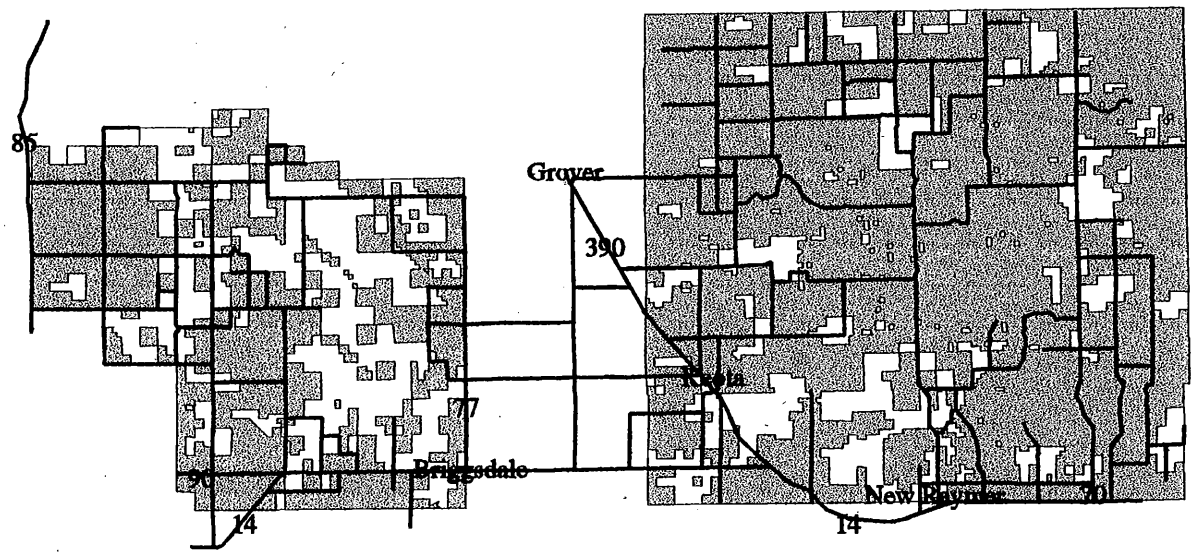
Pawnee National Grassland



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0 1 2 3 4 5

Miles

Legend

Not National Forest System Lands

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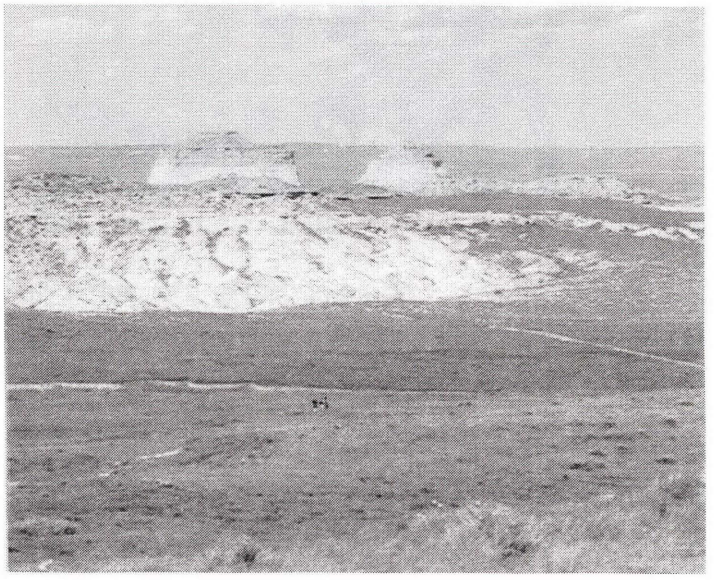
SECTION ONE: THE FOREST AND THE FOREST PLAN

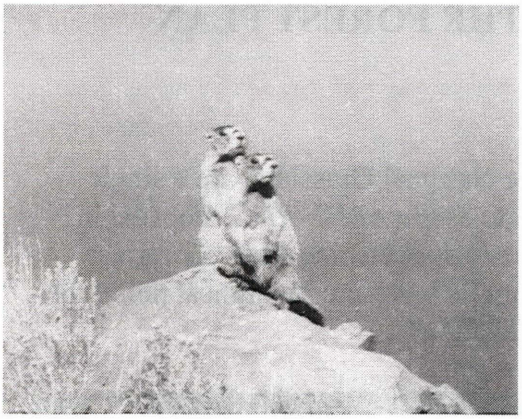
Geography

The Arapaho and Roosevelt National Forests and the Pawnee National Grassland are a single administrative unit of the Forest Service, a unit we will refer to as the *ARNF-PNG*. Located in Northern Colorado, the ARNF-PNG covers over 1.5 million acres, stretching from shortgrass prairie in the east to the crest of the Rockies on the west. From its lowest to its highest point, the ARNF-PNG ranges from 5,000 feet to over 14,000 feet in elevation.

The topography of the ARNF-PNG can be best understood by dividing it into two regions: the Forests and the Grassland. The two Forests lie almost entirely on the eastern slope of the Continental Divide. The sharp drop in elevation from the Divide to the plains initially creates a landscape of steep, rocky slopes covered with Engelmann spruce and lodgepole pine; lower, in the foothills, the vegetation changes to ponderosa pine and grass.



The Grassland, while not far away, exists in another, no-less dramatic landscape. Located at the extreme western edge of the Great Plains, twenty-five miles from the foot of the mountains and at an elevation in the low 5,000's, it is a nearly treeless landscape, covered with the low vegetation of a shortgrass prairie.



Wildlife

Over 400 species of wildlife make their home in the ARNF-PNG, including deer, elk, moose, bighorn sheep, mountain goats, black bear, mountain lions, pronghorn antelope, coyotes, beaver, and golden and bald eagles. A number of fish species, among them rainbow, brook, brown, cutthroat, and lake trout, inhabit the ARNF-PNG's waters. The ARNF-PNG also provides crucial habitat for several threatened and endangered species of plants and animals.

Human Use

Several communities border on or exist within the ARNF-PNG. Members of these communities live in close relationship with the Forests and Grassland, logging timber, grazing cattle, or attending to the tourist trade. Besides economic foundations, the ARNF-PNG provides locals with a backyard, a place to pursue their favorite recreations in every season.

But as many residents of these communities are finding, they have to share this backyard. They share it with visitors from all over the world, drawn by the beauties of Colorado. The locals share it, too, with visitors from the northern end of Colorado's Front Range Urban Corridor, stretching from South Denver to the Wyoming line. Some portion of the ARNF-PNG is within an hour's drive of any urban dweller in this population center.

Recreationists, loggers, ranchers, miners, locals, visitors, hunters, wildlife-watchers: the "multiple uses" of the ARNF-PNG do not always easily coexist. As Forest managers we are asked to accommodate many conflicting interests. The revised Forest Plan gives us a chance to address these conflicts—and you a chance to speak out on how the ARNF-PNG is managed for years to come.

Understanding the issues involved and responding to the demands of each group is what the new DEIS and Forest Plan are all about.

Managing for Ecosystems

Professional and public concern about the loss of species throughout the world is escalating. On June 4, 1992, Forest Service Chief F. Dale Robertson announced that "an ecological approach will be used to achieve the multiple-use management of the National Forests and Grasslands."

Forest Service policy for ecosystem management was established. We are now mandated to:

- ensure the continuing health and diversity of ecosystems;
- strive to gain greater scientific understanding of ecosystem functions;
- use the correct technologies to restore deteriorated ecosystems; and
- manage—within the limits of ecosystem health and diversity—Forests and Grasslands to accommodate human needs, uses, and values to provide products and services.

THE FOREST PLAN

At the heart of management of any National Forest or Grassland is a Land and Resource Management Plan—a Forest Plan. Our original Forest Plan was issued in March of 1984. That plan was appealed by the Colorado Mountain Club (CMC) and remanded back to us in 1987 for further analysis of the timber program.

In the meantime, several of the laws and rules that influence Forest management had been changed. The public's values, as well as the way they used the ARNF-PNG's resources, had also shifted. *In 1989, in light of all the changes required, we decided in an agreement with the CMC that, rather than adjust the original Forest Plan, we would undertake our first formal Forest Plan revision—creating, in effect, a new Forest Plan.*

THE REVISION PROCESS

Now you know what a Forest Plan is and why we are assembling a new one, but you're probably still wondering how a Forest Plan is created. Figure 3 shows a brief outline of the process.

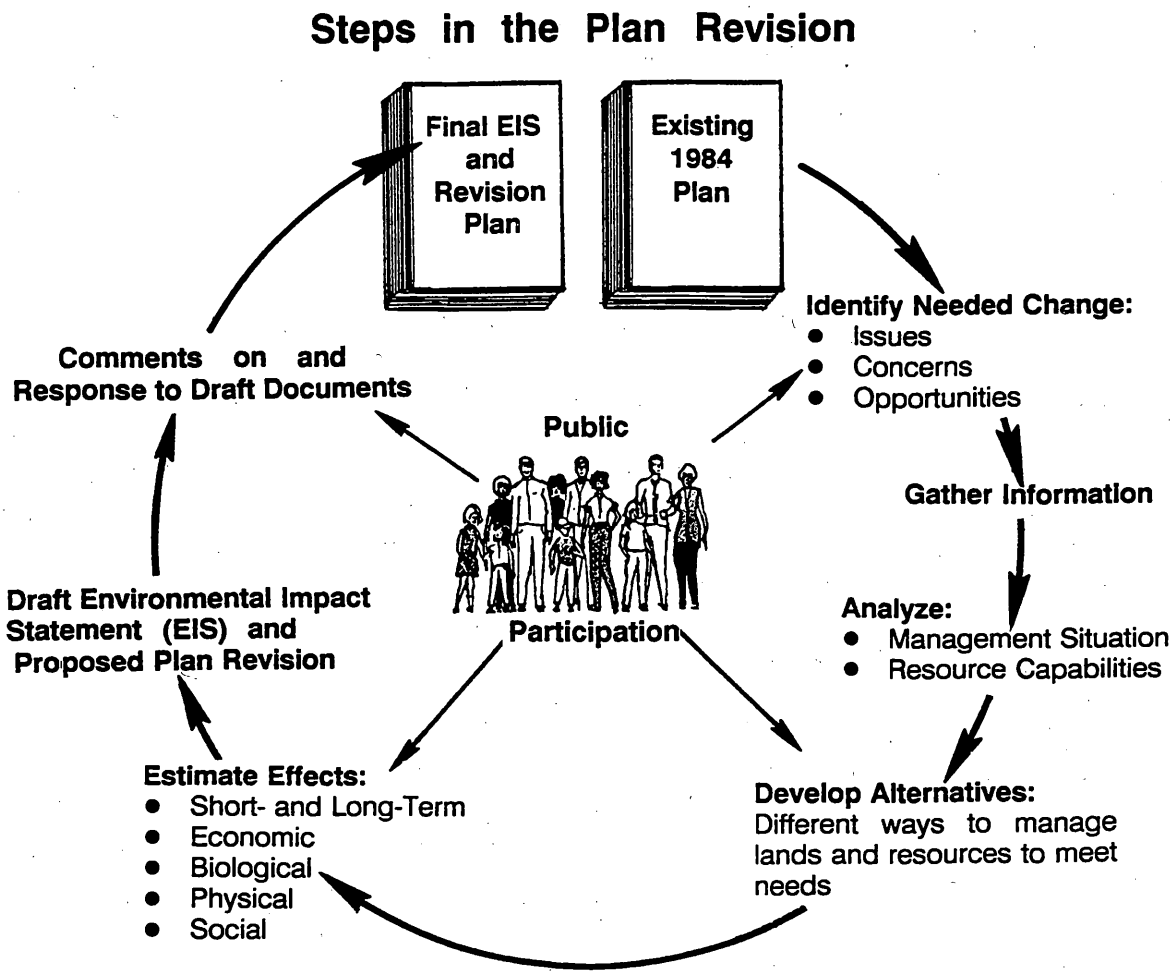


Figure 3

After comments on the DEIS and Proposed Revised Forest Plan are received, we will reanalyze our findings and finalize the set of alternatives, including the recommended new Forest Plan. This Forest Plan will guide the management of the ARNF-PNG for the next 10-15 years.

(Parts of the existing Forest Plan did not require any changes. These sections were transported intact to all the alternatives. Since they do not represent any change, they will not be covered in this summary.)

It is not only important, but mandatory, that you have a chance to offer your opinion. As required by law, we have indicated the particular alternative that is—at this stage of the process—*preferred*, and you and other interested parties now have at least three months in which to review our efforts and respond with ideas and suggestions.

THE DEIS

Okay. You know the how and why of the Forest Plan. But where does the Draft Environmental Impact Statement fit in?

As required by law, all major federal actions that have an effect on the environment need to disclose those effects in an environmental impact statement, an EIS. Simply put, the EIS shows the alternatives considered in any action and the environmental effects each alternative will have. This summary explains a *draft* version of the EIS required for the new Forest Plan.

SECTION TWO: ISSUES

In the last section we familiarized you with the ARNF-PNG and the Forest Plan process. In this section we will discuss the major issues and the alternatives that, with your help, we have developed.

ISSUES = REVISION TOPICS

Early in the planning process (see Fig. 3, page 4) public involvement helped to identify the issues in ARNF-PNG management. Many of the identified issues were judged to be adequately provided for in the original Forest Plan, and several more required only minor adjustments. However, a number of issues remained. These issues, often the most controversial ones, lie at the heart of the Forest Plan revision process. For simplicity's sake, they have been grouped together with related issues and given the name **Revision Topics**.

THE REVISION TOPICS

Revision Topic 1: Maintenance of Biological Diversity (Biodiversity)

Biodiversity management incorporates a fairly recent understanding that the natural world is made up of a complex web of relationships, even the smallest of which cannot be overlooked without risking damage to the whole.

Managing for biodiversity on ARNF-PNG lands means managing to maintain the integrity of the communities of plants and animals, the individual species of plants and animals, the different genes within those species, and the thousands of different ways individual organisms interact with one another and their environments.

Biodiversity is affected by both human uses and natural processes. The **new Forest Plan** must detail methods for monitoring and managing biodiversity.

Revision Topic 2: National Forest and Residential Intermix

A certain amount of private land has always existed inside and on the borders of ARNF-PNG lands. More and more people are now building homes or otherwise developing these lands. The existence of so much developed private property among ARNF-PNG lands can break up wildlife's winter ranges, restrict recreational access, and change the quality of a user's recreation experience.

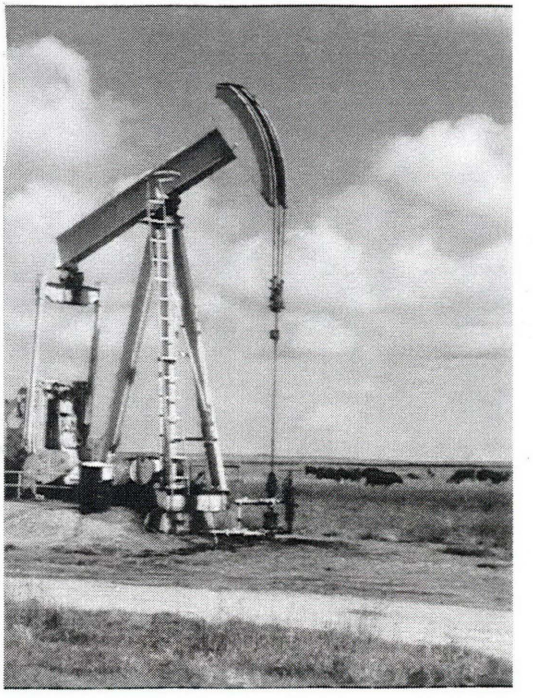
The revision process gives us a chance to assign such areas to a particular management strategy, called the *Intermix management area prescription.* The primary purpose of the Intermix prescription is to maintain cooperative relationships between landowners and federal land managers, to provide for compatible multiple uses, reduce the potential for destructive wildfires, and consolidate land ownership.

The **new Forest Plan** must establish the amount and location of any lands in the ARNF-PNG that will be assigned to the Intermix prescription.

Revision Topic 3: Oil and Gas Leasing

The oil and gas industries prefer that large areas of land be made available for leasing, and they feel that their activities on ARNF-PNG lands can be moderated to acceptable levels. Other users see oil and gas development as being in conflict with biodiversity and recreation, and would prefer little or no oil and gas development on ARNF-PNG lands.

In addition, a law passed in 1987 requires that we conduct an analysis to determine what areas of the ARNF-PNG could be offered for oil and gas leasing, and authorize the USDI-Bureau of Land Management to do so. The **new Forest Plan** must establish the amount and location of any lands available for leasing.



Revision Topic 4: Recreation Related Issues
The recreation activities of a growing population have placed a great deal of pressure on the ARNF-PNG's lands and facilities. The issues in recreation management fall into five subcategories: *Developed Recreation*, *Dispersed Recreation*, *Recreation Settings*, *Scenic Resources*, and *Wild and Scenic Rivers*.

Developed Recreation areas include campgrounds, picnic areas and downhill ski areas. Because of heavy use and budget constraints, many of the facilities at developed recreation areas are in poor condition.

The **new Forest Plan** should establish guidelines for what types of facilities we need to provide, where we should provide them, and how many of each we should offer.

Dispersed Recreation areas include most lands in the ARNF-PNG that are not in developed recreation areas—the vast majority of the ARNF-PNG. Hiking, fishing, hunting, snowmobiling, and cross-country skiing are only some of the activities that take place in dispersed recreation areas.

Many feel that enough land exists in the ARNF-PNG to absorb the increase in dispersed activity—if the activities can be distributed more effectively. Roads and trails, suitable parking, backcountry campsites, and information about the availability of dispersed areas are the keys to distributing the users throughout the ARNF-PNG.

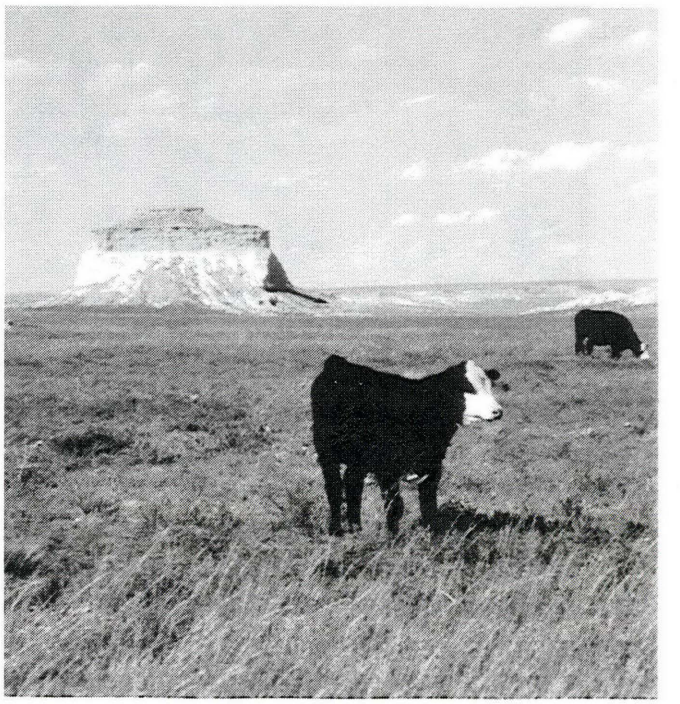
The **new Forest Plan** should address these keys, as well as establish the sort of recreation opportunities we should provide to users.

The term *Recreation Settings* refers to the conditions necessary for various types of users to truly enjoy themselves, whether that entails a stretch of good wildlife habitat, a sense of isolation, or an expanse of untracked snow. However, different ARNF-PNG users have conflicting requirements for recreation settings (rafters and fishers, hunters and wildlife viewers, etc.), which can lead to public complaints and management problems.

Increased use of all sorts can also harm an area. In addition, many users believe that some activities, such as logging and grazing, irretrievably damage the quality of their experience.

The **new Forest Plan** must determine which kinds of recreation activities get priority in specific areas, then manage the areas to maintain the conditions that provide a satisfactory experience for the users.

One thing that almost all visitors to the ARNF-PNG expect to find is magnificent, natural scenery, or *Scenic Resources*. Yet many regularly occurring activities in the ARNF-PNG can alter the scenery.



To help establish standards for scenery, we use what are called "visual quality objectives," or VQO standards, for various areas in the ARNF-PNG. Unfortunately, there has been a great deal of confusion and frustration interpreting the VQO standards the way they are now written.

The **new Forest Plan** must seek to clear up this confusion by defining and explaining VQO standards and making them easier to apply in management situations.

It is up to us to recommend any rivers or streams in the ARNF-PNG for inclusion in the *National Wild and Scenic Rivers System*. We have inventoried and studied all the rivers and streams in the ARNF-PNG, and recommended the North Fork of the Cache la Poudre River, North St. Vrain Creek, Rock Creek, and Cabin Creek as possible candidates for inclusion.

Revision Topic 5: Inventoried Roadless Areas

As was the case with wild and scenic river designation, we are required by law to evaluate all the roadless areas in the ARNF-PNG, choosing which to recommend for wilderness designation, and setting in place guidelines for managing those roadless areas not recommended.

The public has shown a strong interest in the management of roadless areas. Should those roadless areas not designated as wilderness be maintained in a roadless state, keeping the current scenic views and ecological balance? Or should we open them up to motorized access or other activities such as logging, oil and gas leasing, etc? Differences of opinion exist.

Revision Topic 6: Timber-Related Issues

This topic focuses on how much ARNF-PNG land is suitable for timber production, how much timber will be produced, and what kind of logging techniques will be used to produce it. As we mentioned in Section One, legal action challenging our timber program was one of the chief reasons for undertaking the revision process.

Law requires that timber harvest levels be regularly set and met for each National Forest. We have run into difficulty meeting our projected timber harvest levels, chiefly because many of the chosen timber production areas had been previously harvested and were approaching the limits set for other resources such as water quality, sedimentation, big game cover, and scenery.

The **new Forest Plan** must address the current conflict between projected timber production goals and resource protection standards.

Revision Topic 7: Travel Management

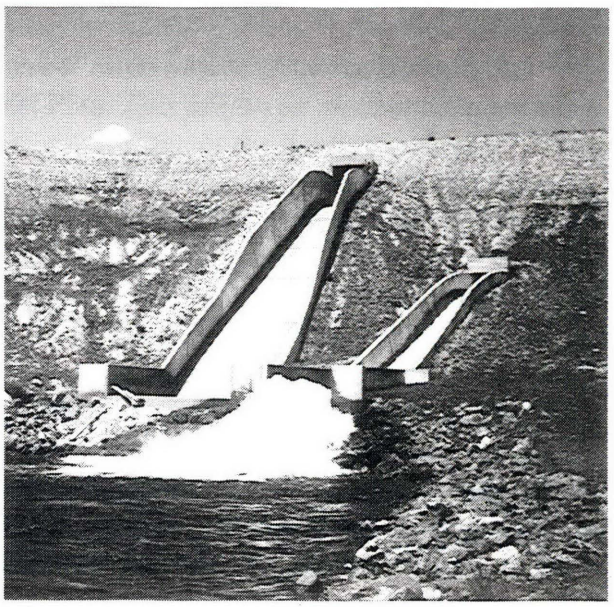
This topic encompasses management of all motorized and nonmotorized access to the ARNF-PNG, including roads and trails. Increased user pressure has created conflicts on roads and trails: the conflict between off-highway vehicle users and hikers is just one example. As use of the ARNF-PNG increases, the impact on resources has also become more noticeable.

The **new Forest Plan** must manage travel to meet the needs of ARNF-PNG users and commodity producers, while offering sufficient protection for fragile resources. In addition, it must coordinate the kind of use each area is being managed for with the kind of road and trail access best suited for that use.

Revision Topic 8: Instream Flows and Water Yield

At the moment all streams in the ARNF-PNG are over-appropriated. This means that water users hold the rights on paper to more water than is flowing in the stream. The demand for water on the Colorado Front Range has grown to the point where there may soon not be enough water left in some water courses to support existing riparian and aquatic life.

A potential solution to this situation, also put forth in the original Forest Plan, was a management strategy designed to increase the water yield of the ARNF-PNG, chiefly through increased logging.



Because of strong opposition to some timber sales and an inability to store much of the resultant runoff which occurred chiefly in the spring, this strategy proved infeasible and has been abandoned.

The **new Forest Plan** must find a way to accommodate the need for increased water supply and storage while maintaining sufficient flows in ARNF-PNG rivers and streams.

SECTION THREE: DIFFERENT PLANS

THE MISSING ALTERNATIVES

Working with public input, we originally assembled seven **alternative Forest Plans**, Alternatives A through Alternative G. During later stages of planning we eliminated three of the alternatives: Alternatives D, F, and G. These three were eliminated because they were either 1) similar to another alternative, 2) unrealistic, or 3) unsatisfactory to the public. As a result of public input on that range of alternatives, two more were added: Alternatives H and I. We are now working with six alternatives.

POINTS TO REMEMBER

As you examine the current alternatives, you would do well to keep several points in mind.

1)As National Forest System managers, we are committed to the multiple use concept, seeking the greatest amount of good for the greatest number of users over the long run—without damaging the integrity of the ARNF-PNG. Our mandate for ecosystem management does mean a change of focus—from *"how can we mitigate our actions?"* to *"how can we sustain ecosystems while producing goods and services?"*

2)Each alternative addresses all the revision topics. What they represent is not the inclusion of some interests and uses and the exclusion of others, but rather, shifts in emphasis, emphasizing some interests and uses while de-emphasizing others.

3)We are required, when assembling the alternatives, to include a "no action" or **"no change" alternative** (Alternative A in the DEIS)—an alternative that represents the management policy continuing as it is now.

4)We are also required to indicate our **"preferred" alternative** (Alternative B in the DEIS), which forms the basis of the new Forest Plan. *This preferred alternative does not represent a final decision, only our preference at this stage of the analysis.* New information, continued analysis, and/or public feedback could result in additional "fine tuning" of the alternatives, or the selection of an entirely different or new alternative.

5)No plant or animal species will be lost as a result of the management alternatives.

6)During the evaluation phase, two budgets were developed for each alternative. One was the budget necessary to implement the alternative. A second budget was projected based on the actual level of past funding. In some of the more ambitious alternatives, projected recreation and travel improvements could be severely curtailed by typical experienced funding. Most alternative comparisons in this summary are based on full funding, but readers should be aware of the possible limitations.

THE ALTERNATIVES

Alternative A (No Change)

This alternative gives a picture of ARNF-PNG management if the present Forest Plan—modified to meet new laws and regulations and to reflect more achievable timber harvest levels—were carried into the future.

Theme: The philosophy behind this management was "multiple use." Since this philosophy was in place before much of the current research on biodiversity, there was little emphasis placed on managing for the "whole" ecosystem. Rather, we tried to achieve a balance between the "parts," chiefly those that were economically important.

Recreation, Commodities, and the Ecosystem: If we were to continue with this alternative, ecosystems in wilderness and other protected areas would be allowed to progress through natural ecological processes, but the rest of the ARNF-PNG would be managed in a "hands-on" fashion to provide as many recreation opportunities and as much commodity production as possible while staying within the limits of multiple-use philosophy. The mix of recreational uses would be more or less the same as it is now, and access to nonwilderness areas would be controlled by very few regulations. Facilities (campgrounds, trailheads, etc.) in the poorest condition would be reconstructed.

Some portions of ARNF-PNG ecosystems would be impacted up to the limits of our standards and guidelines.

Alternative B (The Preferred Alternative)

Theme: The theme of this alternative is balance. No element of the ARNF-PNG ecosystem, including human use, would receive substantially greater emphasis than any other, although there is less commodity production than at present due to intermix areas, scenic areas, Research Natural Areas, and wilderness recommendations. In this alternative we would try to create an even distribution of recreation uses and commodity activities throughout the ARNF-PNG—within the capabilities of the individual ecosystems. In this way we intend to maintain or improve biodiversity while allowing some changes in the less fragile ecosystems.

Recreation, Commodities, and the Ecosystem: In this alternative we would move toward greater natural biodiversity, but do so while continuing to support some degree of timber and grazing activity. Large blocks of Forest will remain undeveloped and unroaded; these blocks will often be adjoined by areas of development, commodity activities, and recreational use. Some ecosystems would be allowed to progress through natural ecological processes. The mix of recreational uses would be more or less the same as it is now, and access in all areas of the ARNF-PNG would be controlled and regulated. Most rundown ARNF-PNG facilities would be scheduled for reconstruction.

Alternative C
Theme: The theme of this alternative is economic stability, a stability provided by higher levels of timber harvest and other commodity activities, supporting the economy at both a local and national level. Principles of ecosystem management would be integrated into the plan, and features of the ARNF-PNG that support the tourism and recreation industries—chiefly scenery—will be safeguarded.

Recreation, Commodities, and the Ecosystem: This alternative is aimed at maximum commodity production: the highest level of timber harvest and the least restrictive oil and gas leasing regulations. Ecosystems would be managed in a "hands-on" manner, especially in commodity-producing areas. Recreation will be emphasized at developed recreation areas—more campground units, more trailhead parking. Access outside of wilderness areas would be generally open and controlled by very few regulations.

Some portions of the ARNF-PNG ecosystem would be impacted up to the limits of our standards and guidelines.

Alternative E
Theme: The theme of this alternative is recreation. Many people, especially along the urban Front Range, feel that recreation should be given increasing emphasis in ARNF-PNG management. This alternative will manage for activities such as camping, auto travel, skiing, hiking, hunting, fishing, mountain bicycling, and off-highway vehicle travel, particularly by increasing the areas open to motorized backcountry travel.

Recreation, Commodities, and the Ecosystem: This alternative is aimed at opening up more recreational opportunities for ARNF-PNG users. As part of the trade-off, fewer areas would remain open to commodity production—for logging, grazing, and oil and gas leasing. Ecosystems would be managed in a "hands-on" manner, attempting to encourage human use and natural ecological processes to coexist whenever possible. Nonmotorized backcountry use would continue in wilderness areas, but most other areas would be opened to motorized use. Some sensitive ecosystems would also be developed for water-recreation activities. All rundown and damaged facilities (campgrounds, picnic areas, trails and trailheads) would be scheduled for reconstruction. Access outside of wilderness areas would be open and controlled by very few regulations.

Some portions of the ARNF-PNG ecosystem would be impacted up to the limits of our standards and guidelines.

Alternative H
Theme: The theme of this alternative, conceptualized by the Colorado Environmental Coalition,

is managing for natural ecological processes—protecting the greater ecosystem from the worst effects of human use and letting it evolve unhindered, as it has done for countless centuries. It does so by recommending large portions of the ARNF-PNG for wilderness protection, increasing nonmotorized recreation possibilities, and protecting areas to ensure the continued existence of all native species of fish, plants, and wildlife.

Recreation, Commodities, and the Ecosystem: This alternative emphasizes the importance of biodiversity and complete ecosystems, and manages all human activities in relation to protecting these processes. Large tracts of land are preserved as core reserves and wilderness areas, and are connected by corridors for wildlife travel. Human use, such as logging and recreation, is allowed where it is compatible with biological diversity. Ecosystems would be allowed to progress through natural ecological processes. Development of new campgrounds, picnic areas, resorts, etc., would be minimized and the number of miles for off-highway motorized travel would be reduced. Access in all areas of the ARNF-PNG would be controlled and regulated.

Alternative I

Theme: The theme of this alternative, proposed by the Ecosystem Council for Multiple Use, is human use. In it, the emphasis is placed on recreation use and commodity production, while incorporating the principles of ecosystem management. This is done by encouraging commodity production while opening up more of the ARNF-PNG to motorized travel and recreational development. Features of the ARNF-PNG that directly and indirectly support the tourism and recreation industries—chiefly scenery—will be safeguarded.

Recreation, Commodities, and the Ecosystem: Commodity production will be at slightly lower levels than in the current Plan because of areas managed for motorized backcountry recreation, recreational complexes, residential and Forest intermix, and scenic values. Ecosystems would be managed in a "hands-on" manner to ensure both recreation uses and a sustainable flow of commodities within the biological means of the ARNF-PNG. The recreational emphasis is on increased numbers of miles for off-highway motorized travel, trailhead parking, and campground units. Access outside of wilderness areas would be open and controlled by very few regulations.

Some portions of the ARNF-PNG ecosystem would be impacted up to the limits of our standards and guidelines.

SECTION FOUR: COMPARING THE ALTERNATIVES BY ISSUE

UNDERSTANDING MANAGEMENT AREAS

Before we start comparing the alternatives by revision topic, we'll give you one more important detail on Forest Plan implementation.

Because National Forests and Grasslands are huge and varied areas, any number of combinations of ecosystem emphasis, travel and recreation restrictions, and commodity production regulations could be prescribed to manage individual sections. To clarify this process, the Forest Service has drawn up a list of different management prescriptions to be applied to sections of Forest or Grassland as the creators of each Forest Plan see fit.

These prescriptions are called *management areas*. (The name does not refer to a physical area. It is, instead, an area out of the whole spectrum of management possibilities.) They range from 1.1 (Wilderness) through 8.22 (Ski-based Resorts). Looked at another way, they range from almost totally natural conditions at the low end of the scale to extensive use by humans at the top end of the scale.

Most of the management differences between alternatives are a result of how the alternatives assign management areas. One alternative, for instance, could assign a greater share of ARNF-PNG land to 5.5 (Dispersed Recreation—Forest Products), where another puts the same area in a combination of 4.3 (Dispersed Recreation) and 1.41 (Core Habitats —Existing). Figure 4 illustrates this example. Two entirely different management strategies for ARNF-PNG result.

The set of maps included with this summary contains maps that show management area prescriptions allocated to all areas of the ARNF-PNG by alternative. Tables 1 and 2 list the management area acres by alternative.

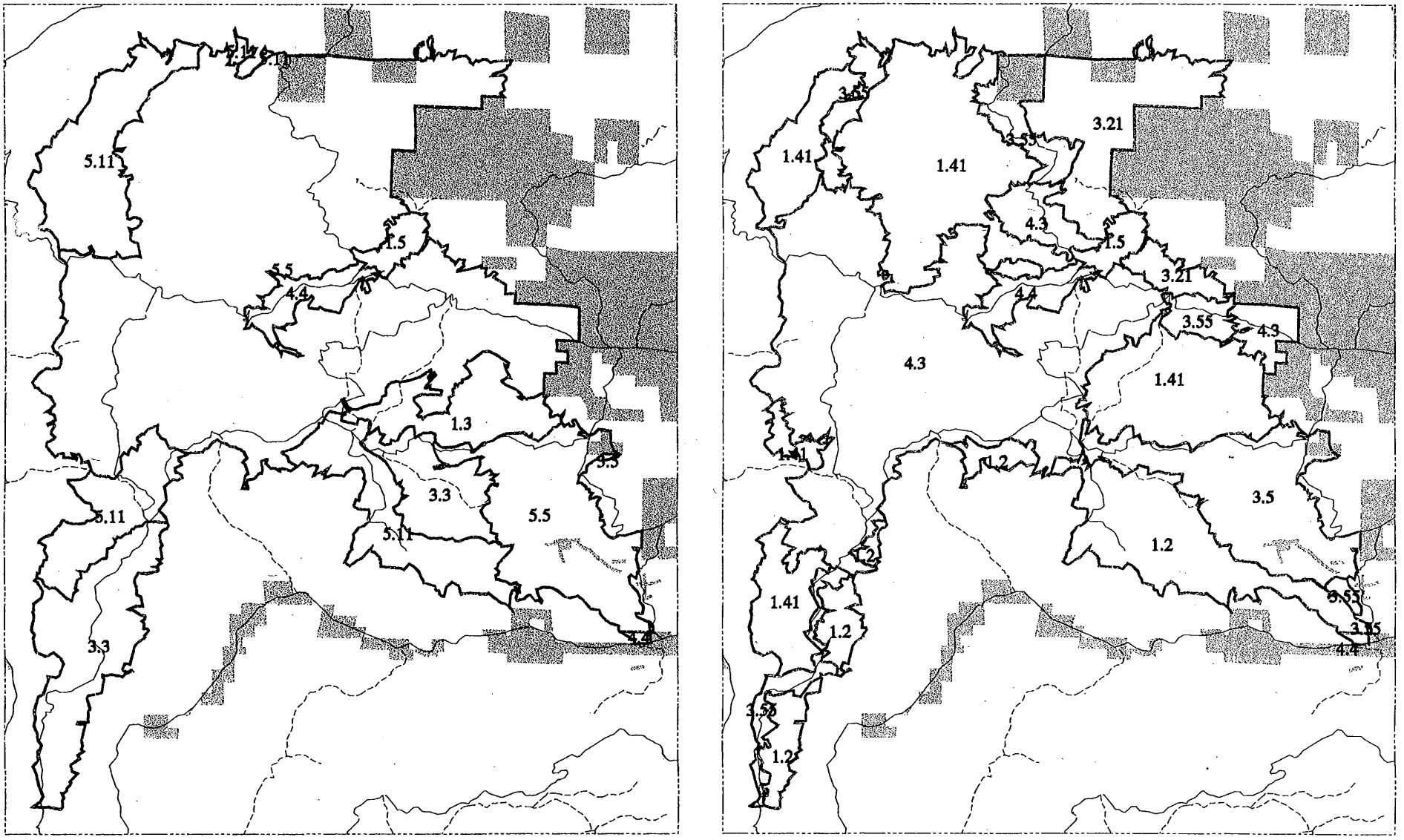


Figure 4
The Deadman Geographic Area allocated to different management areas under different alternatives.

Table 1 Management Area Allocations for the Revision, ARNF, 1995

Management Area	Alternatives					
	A	B	C	E	H	I
1.1 Wilderness	295,562	295,562	295,562	295,562	295,562	295,562
1.2 Recom. Wilderness	0	29,498	0	0	259,360	0
1.3 Backcountry Rec.	136,371	131,078	58,351	120,769	23,849	0
1.41 Core Areas-existing	0	9,065	0	0	152,757	0
1.42 Core Areas-restor.	0	0	0	0	31,337	0
1.5 Wild Rivers	151	3,272	151	12,025	3,272	151
2.2 Research Natural Area	154	13,032	154	154	0	0
3.1 Special Interest Area	46,462	76,135	46,940	47,449	0	6,285
3.21 Limited Use Areas	0	0	0	0	114,058	0
3.3 Backcountry Rec-mtr	36,426	34,134	23,292	210,804	47,110	114,292
3.5 Flora and Fauna	311,704	304,041	171,310	68,371	50,625	171,870
3.55 Corridors	0	0	0	0	57,636	0
4.2 Scenery	0	31,074	29,256	29,589	0	28,203
4.3 Dispersed Rec	175,809	95,614	62,866	317,897	90,205	56,384
4.4 Recreation Rivers	17,075	18,912	17,075	18,912	18,912	17,074
5.11Gen For and Range	70,275	38,218	212,663	0	25,897	246,681
5.13 Forest Products	152,595	11,900	234,561	0	0	243,655
5.31 Fraser Exp Forest	22,500	22,500	22,500	22,500	22,500	22,500
5.5 Disp Rec-Forest Prod	0	130,914	62,883	94,309	0	21,117
7.1 Intermix	0	26,562	25,766	25,766	70,684	24,045
8.21 Dev. Rec Complexes	1,858	3,213	3,653	4,271	15,414	18,707
8.22 Ski-based Resorts	21,684	14,003	21,543	20,348	9,100	22,142
TOTAL	1,288,728	1,288,728	1,288,728	1,288,728	1,288,728	1,288,728

Table 2 Management Area Allocations for the Revision, PNG, 1995

Management Area	Alternatives					
	A	B	C	E	H	I
2.2 Research Natural Area	0	2,723	644	788	13,869	256
3.1 Special Interest Area	762	9,069	2,150	2,150	2,150	2,150
3.21 Limited Use Areas	0	0	0	0	73,174	0
3.61 Prairie Woodland	863	1,339	0	1,339	1,339	0
4.2 Scenery	4,861	4,920	4,920	4,920	4,920	4,920
4.3 Dispersed Recreation	0	345	600	15,170	0	600
6.4 Mid-Comp High Structure, Native Short-grass Prairie	0	51,291	0	0	35,364	0
6.6 Mid-Comp Low Structure, Grassland Resource Production	185,935	122,734	184,107	168,054	61,606	184,495
8.21 Dev Rec Complex	121	121	121	121	121	121
TOTAL	192,542	192,542	192,542	192,542	192,542	192,542

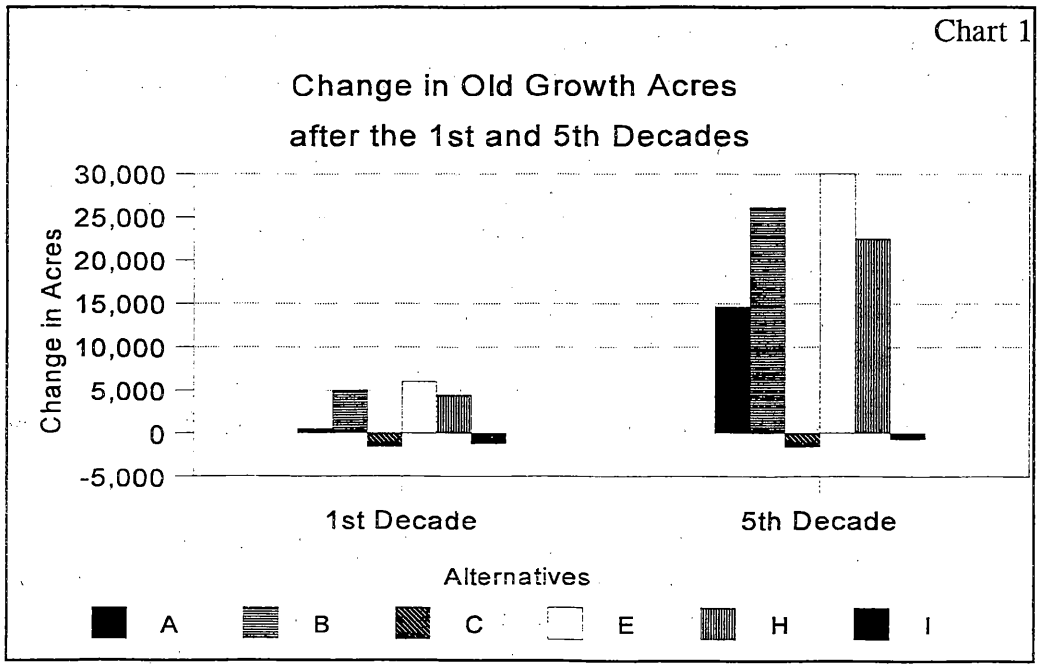
A COMPARISON OF ALTERNATIVES BY REVISION TOPIC

BIOLOGICAL DIVERSITY

In the forests, biological diversity is most affected by any alteration in the composition, pattern, and structure of the vegetation—in other words, how many of which species of trees, shrubs, and grasses grow there, how the species are distributed, and what levels of maturation those species are at. Three factors provide the major influences on the vegetation in the ARNF-PNG: fire, insect and disease, and logging. Here, along with biodiversity, we'll discuss fire and insects and disease. Logging will be discussed in its own revision topic. Related maps included are Old Growth, Habitat Effectiveness, and Range Suitability.

Biodiversity: Managing for biodiversity means managing the ARNF-PNG to maintain a diversity of 1) communities of plants and animals, 2) individual species of plants and animals, 3) different genes within the species, and 4) the thousands of different ways individual organisms interact with one another and their environments.

Biodiversity is a complex issue: opinions differ on how it should be maintained. As mentioned, the key to understanding biodiversity in the ARNF-PNG lies in the makeup of the forests. How the different alternatives handle the question of forest structure, i.e. how much old growth will be allowed to remain in each alternative, can be instructive in revealing their different biodiversity philosophies. Chart 1 displays the difference in acres between existing acres of old growth



(108,900) and the acres of old growth remaining after 10 years and after 50 years. Some alternatives result in increases and others result in slight decreases through time.

Alternatives A, C, and I take the approach that humans can maintain biological diversity and approximate natural processes such as fire and insect and disease infestations by means of timber harvesting, livestock grazing, etc. Alternative H takes an ecosystem preservation approach, relying on the processes of fire and insect and disease infestations to maintain biodiversity. Alternative B holds a position somewhere between these two perspectives by relying on a mixture of all elements. Alternative E, because it focuses primarily on recreation use, relies on natural processes.

Fire: In the ecosystems that make up the ARNF-PNG, naturally occurring fires were a regular phenomena, thinning trees, removing dead wood and thick ground cover, allowing a new crop of trees to sprout, and generally rejuvenating the ecosystems. As such, it greatly affected biodiversity.

Human interference with these fire cycles can and has led to increased insect infestation and a buildup of dead wood—a condition that could contribute to fires of an unusually destructive nature in the future. There are currently two ways of relieving this situation: logging and prescribed burning (reintroducing fire into the ecosystems by means of controlled fires).

Logging and prescribed burning have advantages and disadvantages when looked at from both an ecological and economic viewpoint. Logging thins a forest and provides timber products for the community, but impacts the forest with roads and machinery and produces a landscape that is not completely analogous with a naturally burned area. Prescribed burning more closely mimics nature's processes.

Alternatives A, C, I, and B, in that order, provide the most timber harvest in the ARNF-PNG. Alternatives E and H provide for little logging. (See graphs in Timber-Related Issues discussion, page 30.) Alternative H provides for twice as much prescribed burning as the other alternatives. Prescribed burning is roughly equal in the other alternatives.

Insects and disease: Like fire, insect infestations and disease outbreaks can alter the makeup of the Forests, thus altering biodiversity. Both have existed historically in the ARNF-PNG and will continue to do so.

As a part of the natural course of events, the more mature the vegetation in a Forest becomes, the more susceptible it is to insect infestation and disease. While direct treatment of vegetation against insects and disease in impractical on the scale necessary for the ARNF-PNG, timber and fire management can have an effect on insects and disease. Both logging and fire create more variation in the makeup of the Forests, and thus maintain insect infestation and disease outbreaks

in vegetation at endemic levels.

In terms of controlling insects and disease through timber harvest, Alternatives A, C, I, and B, in that order, would open the most acres to logging, with Alternatives E and H having the fewest. (See graphs in Timber-Related Issues discussion, page 31.) In terms of controlling insects and disease through fire, all alternatives are relatively equal, although the potential for fire in Alternative H might be somewhat higher.

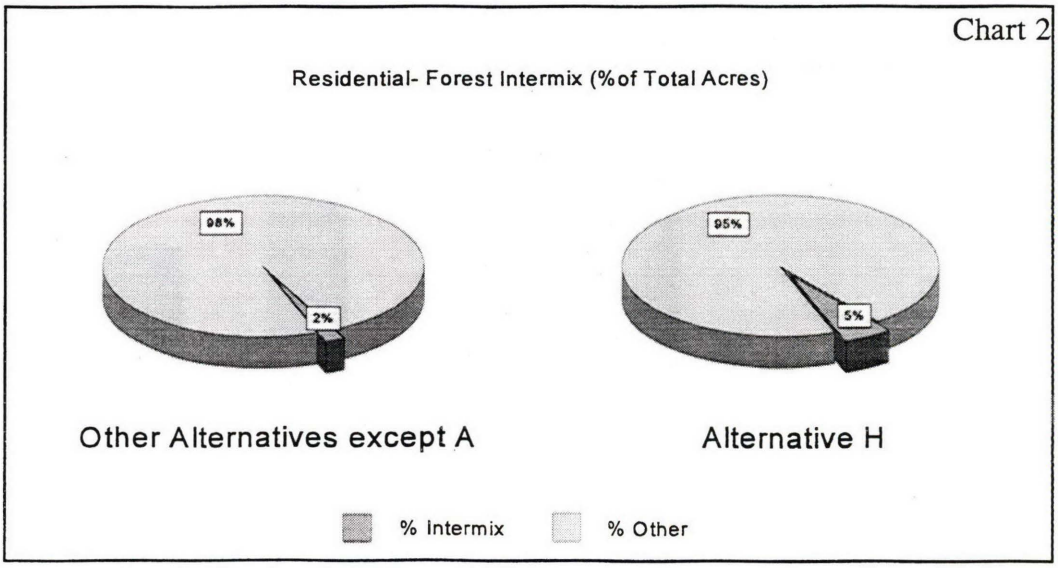
NATIONAL FOREST AND RESIDENTIAL INTERMIX

The Intermix topic addresses situations where nearby private homes and lands strongly affect the management of Forests and Grasslands. The issue is treated by allocating acreage to the *Intermix management area prescription*. Refer to the Management Area maps included in the map packet.

By far the most mixed-ownership land allocated to the Intermix management area is in Alternative H, followed a distant second by Alternative B. In fact, Alternatives B, C, E, and I differ only slightly in the acreages they allocate to the Intermix management area. (Because Alternative A, the "No Change" alternative, was developed before the Intermix management area existed, it allocates no intermix land.) Chart 2 illustrates the percentage of the ARNF-PNG allocated to the 7.1 Intermix Management Area for Alternatives B and H.

Alternatives B, C, E, and I do, however, differ greatly in how they treat land next to intermix areas. Alternative B allocates such lands to wildlife habitat and recreation. Alternatives C and I allocate such bordering lands to logging and recreation. Alternative E allocates these lands to fairly heavy recreation use.

Chart 2

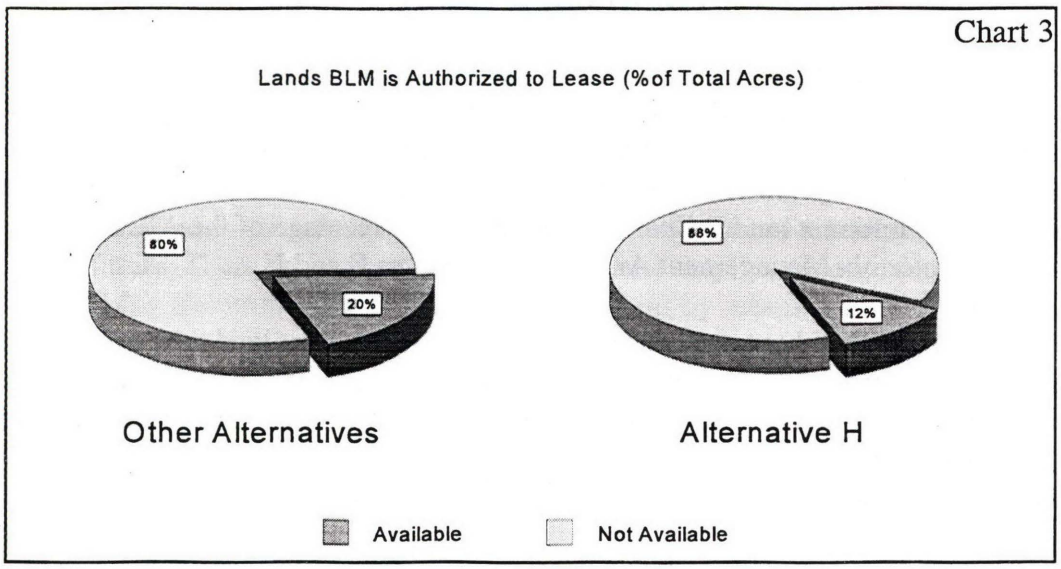


OIL AND GAS LEASING

Oil and gas leasing is permitted on National Forest lands, subject to various Forest guidelines and restrictions on the lease. Oil and gas activities in the ARNF-PNG provide economic benefits, but are viewed by some as carrying with them ecological and scenic disadvantages.

Based on acreage, all alternatives have approximately the same percentage available except for Alternative H. Chart 3 shows the percentage of total ARNF-PNG acres available for leasing. The difference between alternatives lies in the leasing stipulations for each one; Alternatives C and I apply the least restrictive stipulations, B and H are most restrictive. Refer to the Oil and Gas Leasing Map included in the map packet.

Chart 3



RECREATION ISSUES

As you remember from Section Two, all issues of recreation management fall into one of five categories: *Developed Recreation, Dispersed Recreation, Recreation Settings, Scenic Resources, and Wild and Scenic Rivers*. These same categories will be useful in understanding how the alternatives compare with each other in terms of recreation. The related maps included with the map packet are Recreation Opportunity Spectrum, Visual Quality Objectives, and Management Area Maps.

(Note: All the comparisons of alternatives in recreation are based on the highest funding level. But based on experienced funding, there would be fewer facilities constructed.)

Developed Recreation: Many developed recreation facilities are already overburdened by the increased use, and restricted budgets have not allowed us to keep up with maintenance demands on these facilities.

By a large margin, in a fully implemented budget, Alternative E devotes the most resources to developed recreation facilities, followed at a distance by Alternative B. Alternatives C and I devote somewhat less than B. Alternative A would put almost all of its resources into rebuilding existing facilities; Alternative H devotes the fewest resources to developed recreation in general.

Chart 4

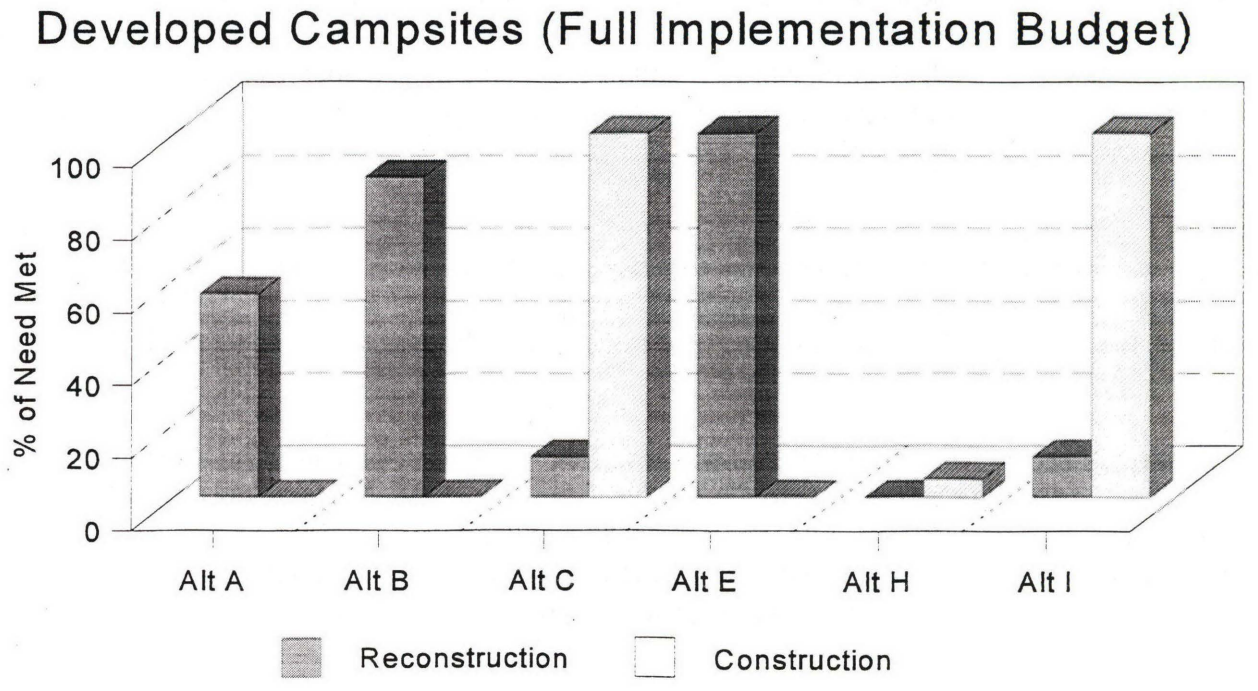
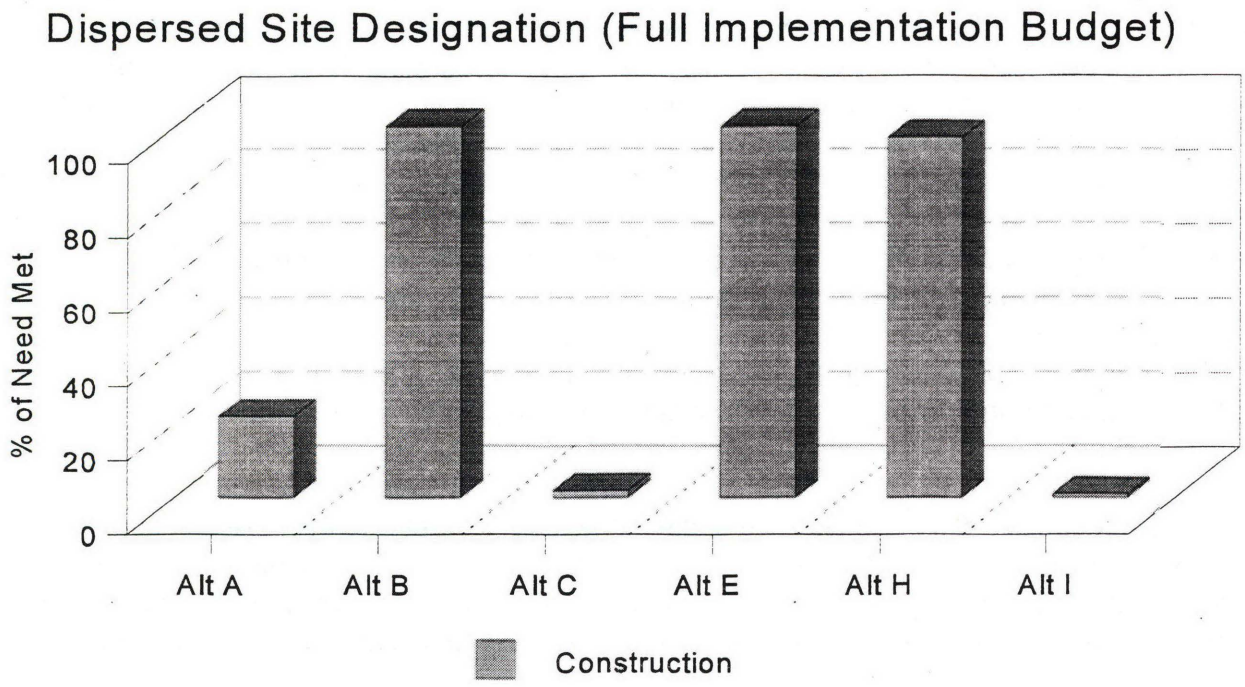


Chart 5



Dispersed Recreation: Dispersed recreation includes all recreation outside of the developed areas. Most of the management expenses for dispersed recreation go toward maintenance and construction of trails, trailhead parking areas, and designated backcountry campsites.

In a fully implemented budget, Alternatives E and B devote the most resources to dispersed recreation, with Alternative H devoting somewhat less, followed by Alternative A. Alternatives C and I devote the least amount of resources to dispersed recreation.

Recreation Settings: By dividing up recreation management for each section of the ARNF-PNG into one of six different settings—primitive, semiprimitive nonmotorized, semiprimitive motorized, roaded natural, roaded modified, and rural—each alternative reveals its particular emphasis.

On a spectrum ranging from what we shall call modified (occasional human interaction, visible human impact, and motorized access) to a primitive setting (few humans, no visible impact, no motorized access), Alternatives I and C most strongly emphasize the modified end of the spectrum; Alternatives A, E, and B—in descending order—reside in the middle of the spectrum; with Alternative H strongly emphasizing the primitive end of the spectrum.

Scenic Resources: This category addresses the amount of change in the natural scenery—due to human activity—we are willing to accept. In the ARNF-PNG, scenery is most often changed by logging activities, road construction, mining, the building of structures, and prescribed burning.

VQOs (visual quality objectives) are the tools we use to define and regulate questions of human impact on the scenery, and they include five categories, ranging from preservation (no change of scenery) to maximum modification (the greatest amount of visual change allowable). As with recreation settings, how the VQOs are allotted by the various alternatives reveals their particular emphases.

From tolerating the most human change in ARNF-PNG scenery to tolerating the least change in ARNF-PNG scenery, the alternatives, in order, are Alternatives C, A, I, B, E, and H, with C tolerating the most change and H tolerating the least.

Wild and Scenic Rivers: There are three different classifications in the National Wild and Scenic Rivers System: 1) *wild*, 2) *scenic*, and 3) *recreational*. A recommendation for *wild designation* effectively ends any possibility of damming or diverting the river, as well as any mineral leasing, logging, or construction possibilities around the river. A recommendation for *recreational designation* would allow for some logging, commodity, and recreational activities, but no future damming or water diversion. None of the alternatives suggested any *scenic river designations*.

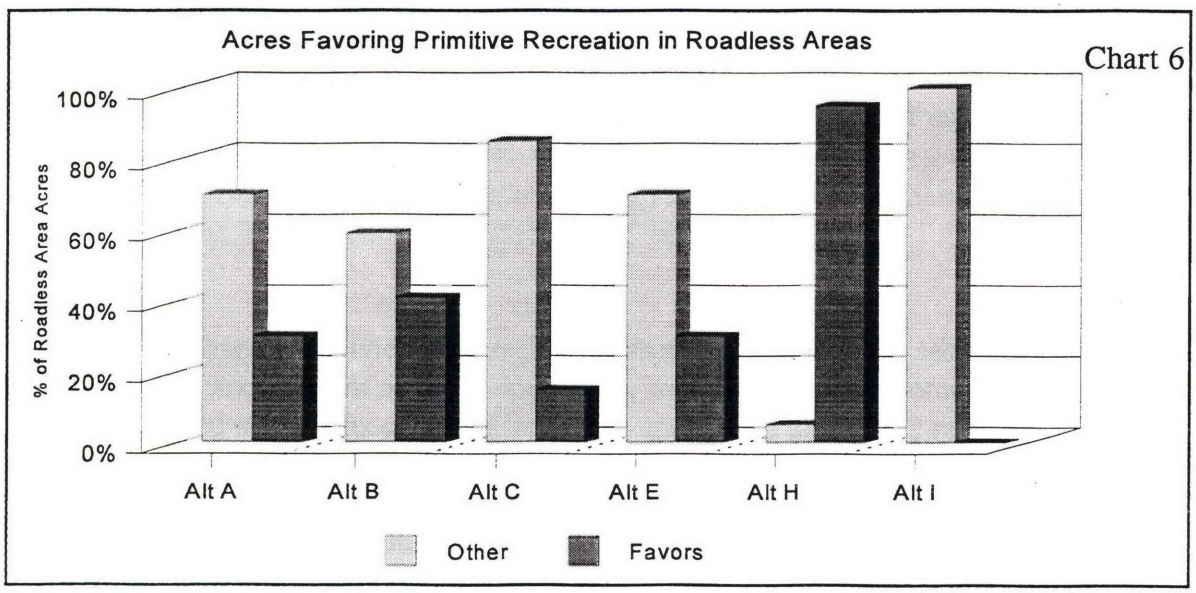
Alternative E recommends the most miles of river for the Wild and Scenic system; Alternatives H and B both offer two-thirds of the miles suggested by Alternative E. Alternatives A, C, and I do not recommend any river miles for inclusion in the system.

INVENTORIED ROADLESS AREAS

We are required by law to inventory and evaluate all roadless areas in the ARNF-PNG for possible recommendation as wilderness. All these roadless areas are now being portioned out to various management areas. Once a roadless area is assigned to a specific management area, it will be managed accordingly (as, for instance, a wilderness area, or a timber production area, or a backcountry motorized area).

The simplest way to compare the alternatives is on the basis of how many acres of the ARNF-PNG's existing roadless areas will remain in an unroaded, nonmotorized state, with no commodity production activity. Under those criteria, Alternative H sets aside almost twice as much roadless acreage as the following alternative, Alternative B. Alternatives A and E set aside somewhat less than Alternative B. Alternatives I and C set aside the least roadless acreage. Refer to the Management Area maps included in the map packet.

The amount of area that is likely to remain undeveloped and primitive in character varies greatly by alternative. Chart 6 shows the percentage of roadless area acres that are in Management Areas that favor primitive recreation and the percentage of acres in other Management Areas. Management Areas 1.2, Recommended for Wilderness; 1.3, Backcountry Recreation; 1.41, Core Habitats; 1.42 Core Restoration; 1.5, Wild Rivers; 2.2 Limited Use Areas; and 3.55 Corridors favor providing opportunities for solitude and unconfined primitive recreation.



TIMBER-RELATED ISSUES

Some people feel the best path to biological diversity and forest health can be achieved by eliminating or severely restricting timber harvest. Others feel the best way to maintain biological diversity and forest health is to use timber harvesting as a tool.

Timber harvesting can be useful for managing biodiversity, insect infestations, tree growth, recreation, wildlife habitat, and fire control. Timber harvesting also provides wood products and economic benefits. On the other hand, timber harvesting can negatively affect recreational experiences, scenic values, wildlife habitat, and water quality. Although logging has historically been an important industry in the ARNF-PNG, these days the ARNF-PNG plays a relatively minor role in state timber production.

When considering timber issues, the best way to compare alternatives is to examine the amount of acreage judged "suitable" for harvest in each alternative. This will give you an idea of how much of the ARNF-PNG could be opened up to logging. Then compare the amount of timber that will be offered for sale in each alternative, the "Allowable Sale Quantity," or ASQ.

In the case of ARNF-PNG, both comparisons give almost the same results. The exception is that in suitable acres Alternative A offers the most, with Alternative C ranking second, while in ASQ Alternative C produces the most, and Alternative A comes in second. All the others maintain the same relative ranking in both categories. In terms of acreage available to logging *and* amount of timber produced, Alternative I ranks third, followed in descending order by Alternatives B, E, and H. In other words, Alternatives A and C are most favorable to timber production, followed by I, B, E, and H. Refer to the Timber Suitability maps included in the map packet.

Chart 7

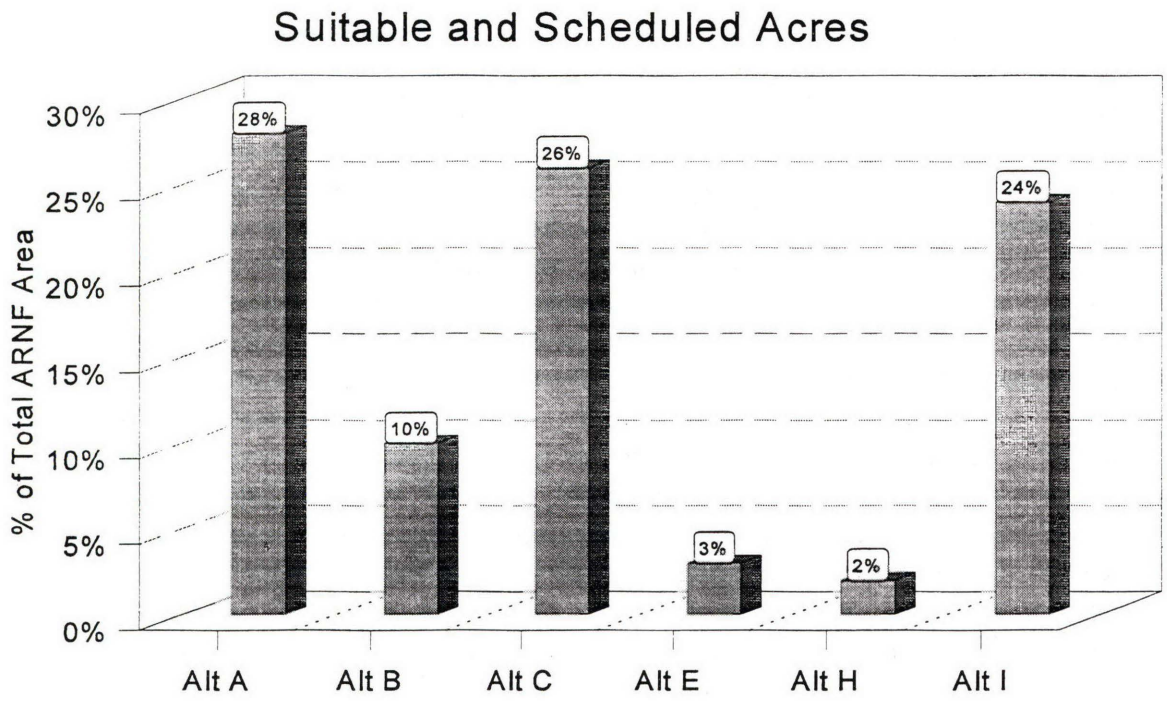
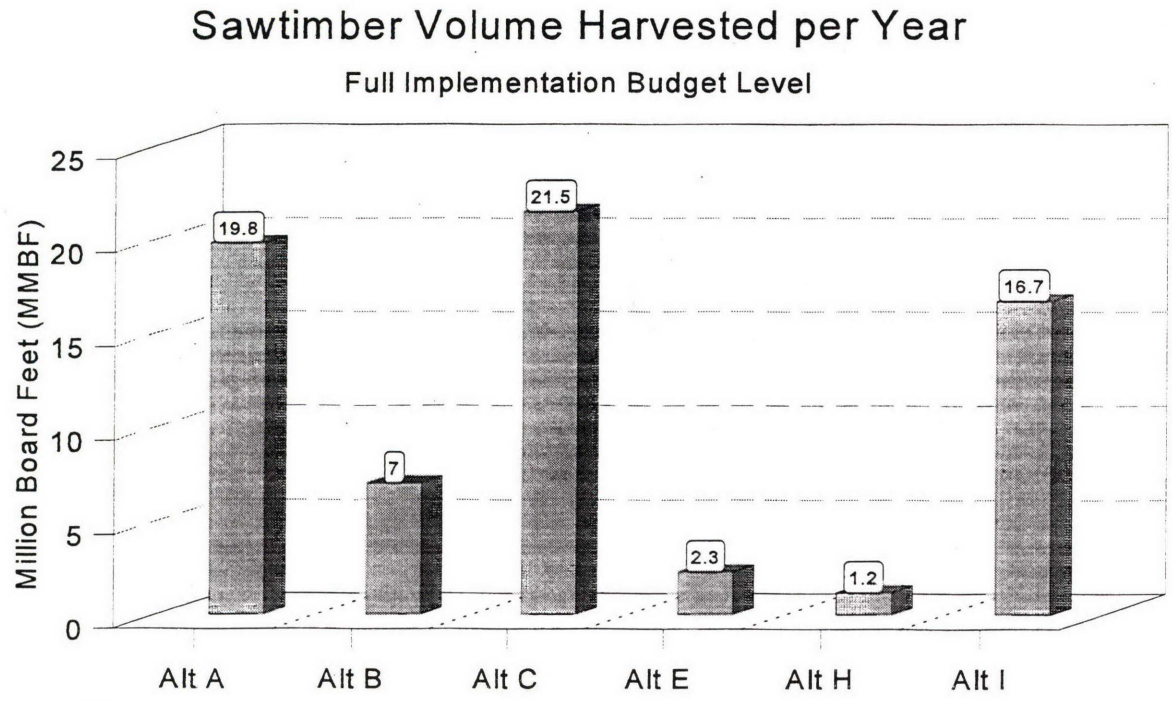


Chart 8



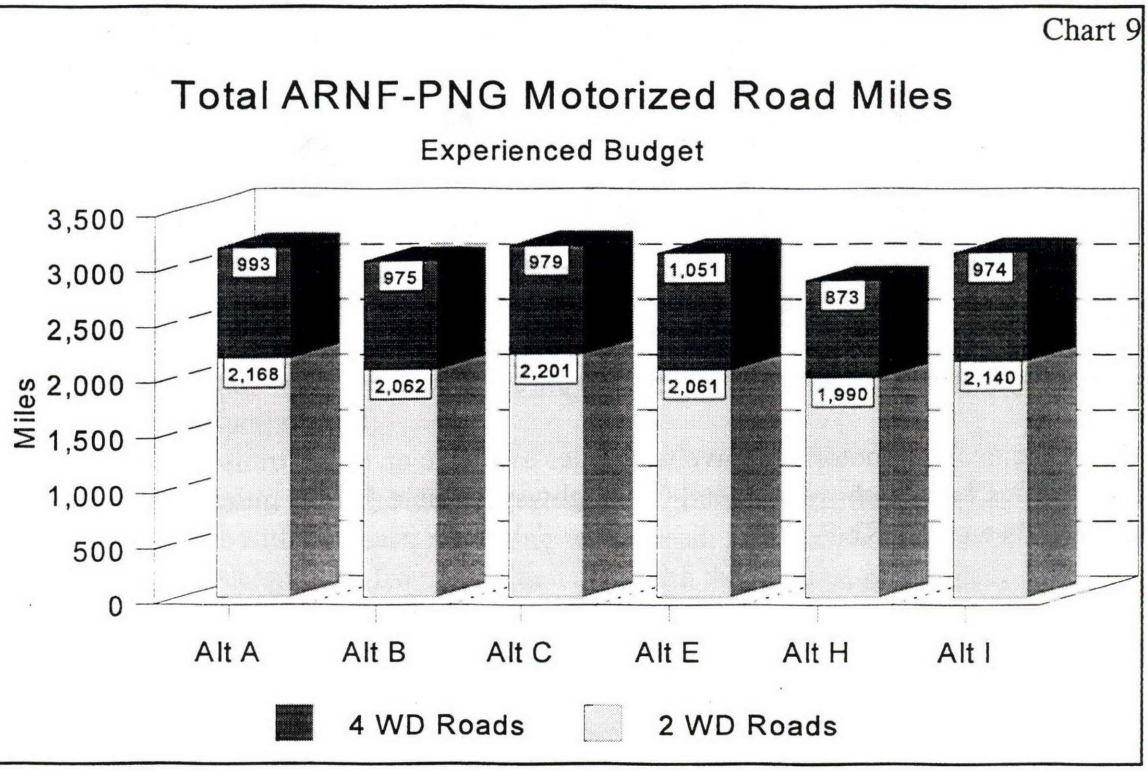
TRAVEL MANAGEMENT

Travel management includes coordinating travel throughout the Forests and Grassland on all gravel roads, primitive roads, designated trails, trails over snow, and waterways in the ARNF-PNG.

All travel management decisions involve trade-offs. For example, closing an area to motorized travel affects not just off-highway vehicle enthusiasts, but hunters, firewood gatherers, snowmobilers, and people with disabilities, among others. On the other hand, closing the area might protect wildlife and increase solitude and appreciation of the outdoor experience for hikers, cross-country skiers, and wildlife viewers.

Although there are many aspects to travel management, a comparison of motorized and nonmotorized travel miles reveals something of the philosophy behind each alternative. When ranked from most miles of roads and travelways for motorized travel to least miles for motorized travel (based on estimated typical budget levels), the alternatives stack up as follows: E, C, I, A, B, and H, with Alternative E designating the most motorized miles and Alternative H designating the least. Refer to the Motorized Recreation Opportunity Map included in the map packet.

Chart 9



Ranked from most miles of nonmotorized travelways to least miles of nonmotorized travelways (again at experienced budget levels), the alternatives rank as follows: H, B, C, E, I, and A, with Alternative H designating the most nonmotorized trail construction and Alternative A designating the least.

Chart 9 shows the total motorized miles available on the ARNF-PNG. These are divided by roads that are usable by two-wheel drive vehicles and those generally requiring four-wheel drive vehicles.

Chart 10

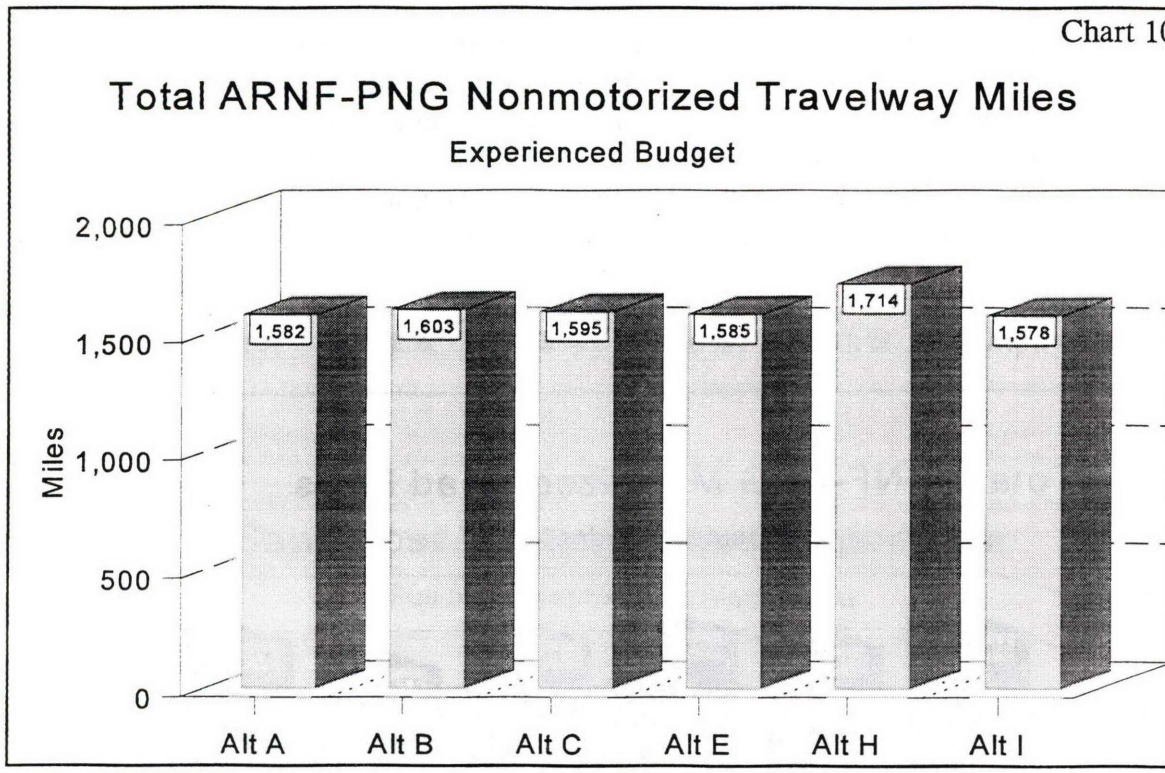
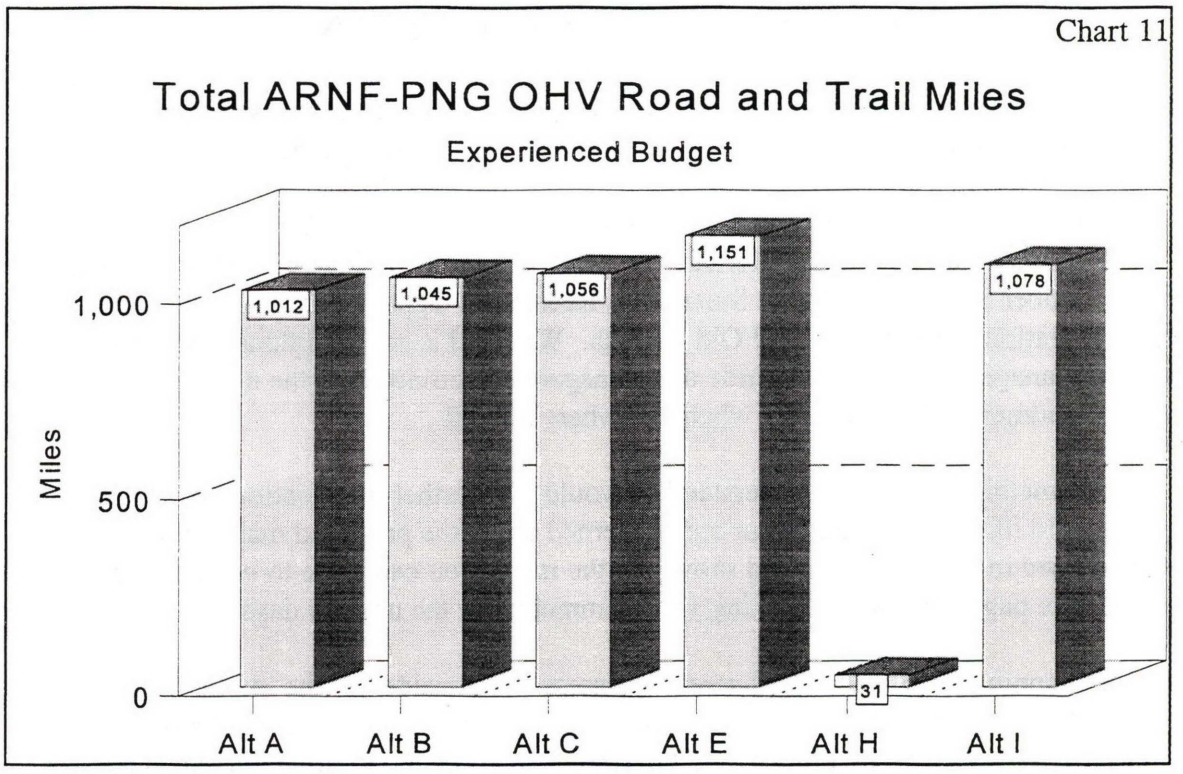


Chart 10 shows the total nonmotorized travelway miles available on either trails or closed roads on the ARNF-PNG. Chart 11 shows the total Off-Highway Vehicle (OHV) miles available on either roads or trails on the ARNF-PNG.



INSTREAM FLOWS AND WATER YIELD

The critical issues of ARNF-PNG water management involve 1) supplying the needs of a growing population for plentiful and readily available water, 2) maintaining the quality of that water supply through careful management, and 3) keeping a sufficient year-round supply of water in area watercourses to maintain the aquatic and riparian life that exists there.

Activities that most affect water quality and aquatic and riparian habitats are those that disturb the soil around watercourses. These activities include—among others—logging, road development, and grazing. One means of comparing the alternatives is on the basis of their allotments for such activities.

On the basis of logging, from the alternative with the greatest potential to negatively impact water quality to that with the least, the listing would read: Alternative C, A, I, B, E, and H. On the basis of road development, from the alternative with the greatest potential to negatively impact water quality to that with the least, the listing would read: E, C, I, A, B, and H; and on grazing: I, A, C, B, E, and H.

SECTION FIVE: IT'S YOUR TURN

With this summary we intended to clearly and fairly present the process, the issues, and the proposed solutions associated with creating and selecting a **new Forest Plan**.

Now it's your turn. Study the maps in the map packet and compare the differences in management area allocations among alternatives. Look at how the different alternatives make decisions on Timber Suitability, Range Suitability, Recreation Opportunity and Visual Quality, Motorized Recreation Opportunity, and Old Growth. When all is said and done, the Final Land and Resource Management Plan will guide our management activities for the next ten to fifteen years, with amendments along the way when and where needed.

So, if there is something you don't understand or would like further information on, give us a call. If you would like to comment on or are concerned about the proposed management direction discussed in this summary and shown on the maps, you can write to us at the address shown on the title page. We will be taking your comments for the next 90 days.

As part of the planning process, we will carefully assess and consider all the public input we receive. We will use your input, balancing it with other factors—factors like legal requirements, environmental effects, economic effects, and the resources at our disposal—to arrive at a Final Plan.

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